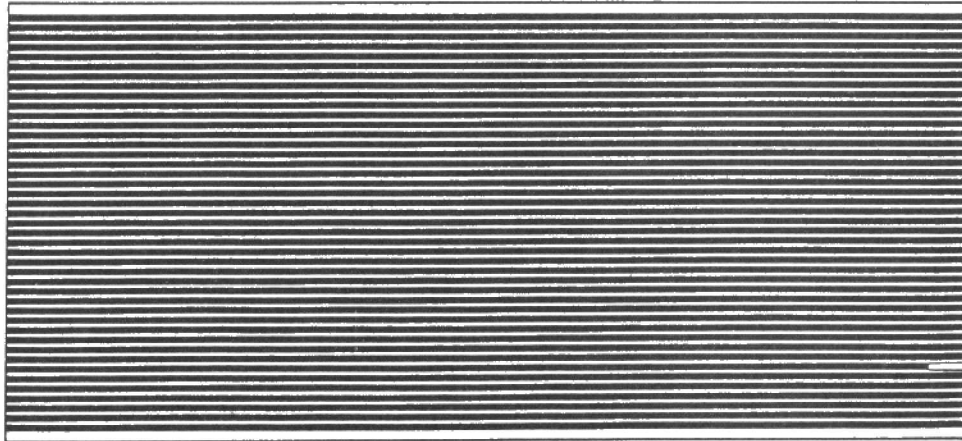


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Interak Extender Card



Interak Extender Card

EXT-1 FEATURES

- * Epoxy Glass, Tinned.
- * Allows cards to be operated outside the system rack, for testing adjustments, or for demonstration.
- * Designed specifically for Interak, but suitable also for other buses e.g. Kemitron KBUS-5 and KBUS-12.
- * Suitable for all International Size cards of 4.5" width having 0.1" pitch connector, and position 37 for polarisation.
- * Suits both single sided and double sided cards.
- * Double Sided, All Tracks Visible.
- * Gold-plated 0.1" pitch edge connector on both sides.
- * Solder Resist Screen on both sides.
- * First issued in April 1983.
- * Low Cost.
- * Dimensions 4.5" x 10".

DESCRIPTION

The Extender Card is used to permit the computer cards to be operated outside the system rack. This makes it much easier to carry out testing, repair and adjustments, on the cards. For educational use it is often desirable to demonstrate various signals on the card, by attaching logic analysers, oscilloscope probes and the like, and of course this is far easier if the extender card is in use.

Because the use of this card makes the chore of testing a computer so much straightforward it can often

pay for itself several times over, perhaps in saved time and mental anguish alone, but definately if it prevents expensive chips or cards being destroyed by the short circuits and wrong connections inevitable when working under difficulties. If they can afford it, users are urged to purchase the extender sooner rather than later, so that they can get the maximum value from it. (It is false economy to struggle on for a long period without an extender card, and finally purchase one just as the main work is coming to an end.)

Competitors

The extender card is supplied as a bare board, ready for the user to fit his own double sided wire-wrap type 43-way 0.1" edge connector. No other mechanical fixing is provided for the edge connector, but simply soldering alone is perfectly adequate, because of the large number of soldered joints (84 in total). We would like to say that we thus discovered the new "surface mount" techniques years ago, but the same design is employed by other manufacturers of extenders for the International size cards, (eg RS Components, BICC Vero Electronics; we can mention these competitors with safety, because their equivalent extender card is about double the price of ours!)

The gold plated connections are continued for a generous length so that the end of the board may be shortened to allow fresh gold to enter the system connectors if the original area is damaged or wears out. The extender card is 10" in length, which is appropriate for use without modification, but it can be shortened by the user if he wishes before he fits the connector.

Biscuit Board

Epoxy-glass material is used for the extender card, to minimise the risk of breakage during use and storage. Note that some manufacturers of extender cards for this purpose use the inferior SRBP (synthetic resin bonded paper) "biscuit board" material, which is more vulnerable to breakage if mishandled.

Both sides of the EXT-1 are coated with a solder-resist mask, usually green in colour. This was specified purely for cosmetic reasons, ie to make the board look pretty, but the solder resist does prevent short circuits if solder blobs drop on the board when it is left lying casually on a work-bench. Another benefit of the solder resist is that it reduces the finger marks that are inevitable on the surface of the card when it is being pulled in and out. Mainly it is a question of style: the Interak computer system is made from top-quality materials and it is devalued if it or its test equipment look anything less than perfect.

Inductance

Bear in mind that the use of any extender card in a modern high performance computer may disturb its operation. There are no active components on the EXT-1, and the track pattern is of necessity for its function simply long parallel traces, with significant inductance and no screening earth planes or tracks - altogether the wrong set of features for good transmission of pulsed signals! Due to the high speeds at which the computer works, the length and impedance of the interconnections between cards is most important, and the use of an extender may cause the system to misbehave. For example RAMs may drop bits, the VDU clear screen may show the odd random character, and so on. We therefore suggest that the use of the extender card should be limited to preliminary testing, fault-finding, adjustments etc.,

and that final performance testing should be carried out only with the cards mounted in their final position. Furthermore, when the EXT-1 is not in use, it should not be "parked" in the system rack, but stored safely somewhere else.

CONTENTS OF KIT

A kit is not provided for this card, since the only component required is a 43-way double sided edge connector with long connection ("wire wrap") terminations, the same as we currently supply for use in the ISBUS backboard.

ORDERING INFORMATION, PRICES

Bare Board	order as "BEXT1"	12.75 + VAT
Edge Connector	order as "43DS"	3.95 + VAT

We intend to produce a manual for the EXT-1 (manual code MEXT1), but there is so much other work elsewhere on the system to be done first, it will not be ready for a considerable time. Most of the main points of usage have however been covered above, so you should have no difficulty using the EXT-1 without further explanation.